United States
Environmental Protection
Agency

Office of Public Affairs
Region 5
77 West Jackson Blvd.
Chicago, IL 60604

Illinois Indiana
Michigan Minnesota
Ohio Wisconsin

NEASE CHEMICAL SUPERFUND SITE UPDATE

Salem, Ohio **January 1994**

This progress report will give you. . .

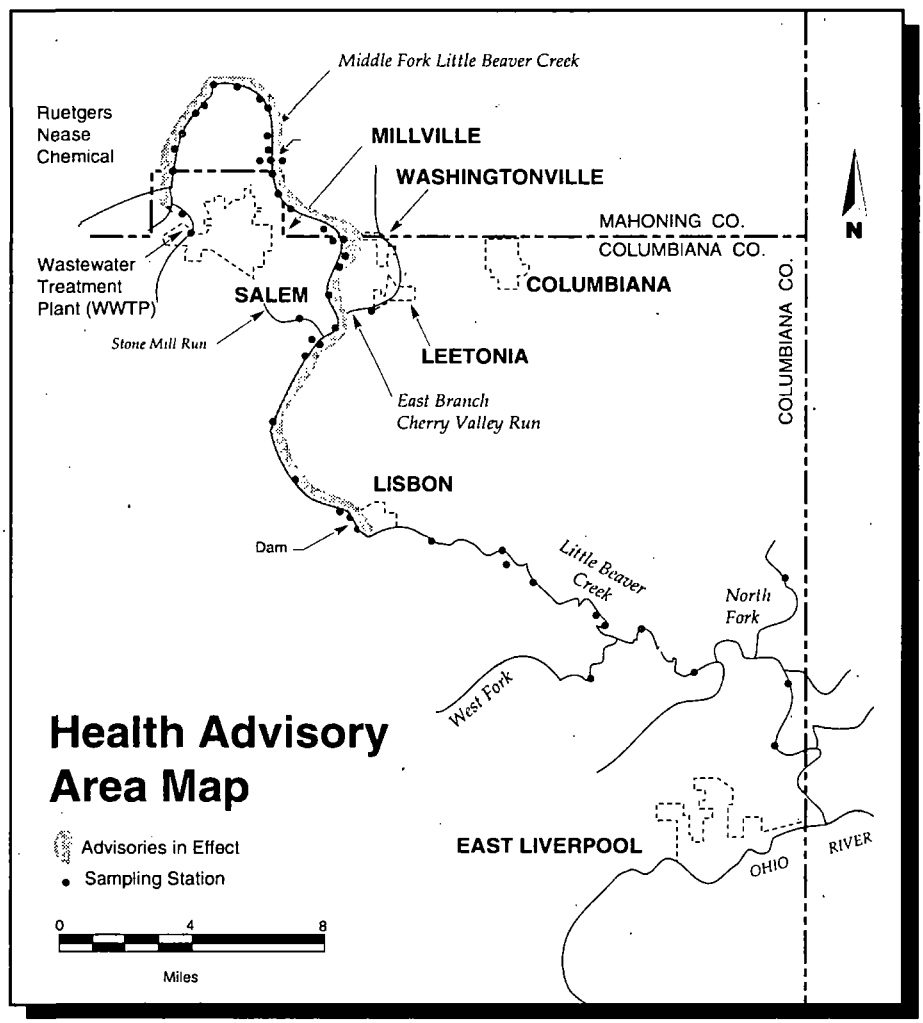
- *An update on the progress of the Remedial Investigation*
- *Information on upcoming meetings*
- *Information on mirex toxicity*
- *What will happen next*
- *A reminder of the health advisories*
- *Where to find more information*

Upcoming Meetings

Your questions and concerns are important to us. An availability session will be held later this month to answer questions and address your concerns about activities at the site. This session will be **informal** and all interested citizens are encouraged to attend. You will be notified of the time, date, and location.

A public meeting will be held in the Spring of 1994 shortly after the Final RI Report is released to discuss the results of the RI.

Both meetings will be announced with an advertisement in the local paper.



INTRODUCTION

Since the last fact sheet on mirex in November 1992, many investigative activities have taken place at the Nease Chemical Superfund site. This progress report is to update you on the activities that have taken place at the site since the last public meeting held on July 14, 1992. The on-going investigation, referred to as a Remedial Investigation (RI), at the Nease Chemical site is being conducted by Ruetgers-Nease Corporation (Ruetgers-Nease) under the supervision of the United States Environmental Protection Agency (U.S. EPA) and the Ohio Environ-mental Protection Agency (Ohio EPA).

PROGRESS OF THE REMEDIAL INVESTIGATION

Since the last public meeting, Phase II of the investigation, which involves studying contaminants on the site itself and on adjacent properties, has been completed. This involved extensive ground-water, surface water, soil, and sediment sampling on and around the site.

On July 6, 1993, Ruetgers-Nease submitted a Revised Draft RI Report to U.S. EPA and Ohio EPA. The Draft RI Report included the results of the previously completed Phase I activities (which involved the Middle Fork Little Beaver Creek [MFLBC]), and the recently completed Phase II sampling activities.

The progress made at the site since the last public meeting involved three main areas that included: an environmental assessment of MFLBC; additional on-site inspections; and, a pilot study for the ground-water and leachate treatment system.

Environmental Assessment

Upon preliminary review of the Draft RI Report, the agencies noticed several deficiencies involving the ecological assessment that was conducted under Phase I. The following areas required further study:

- Indiana Bat Habitat Survey;
- Supplemental Sampling of Egypt Swamp; and
- Ecological Characterization of the Wetlands and other Habitats.

So as not to miss the sampling season, U.S. EPA promptly notified Ruetgers-Nease of these deficiencies and required that Ruetgers-Nease spend late summer and early fall at the site conducting these additional studies.

Indiana Bat Habitat Survey

The Indiana bat is an endangered species that lives in the general area of the Nease Chemical site during the summer. Since endangered species must be protected, it must be determined whether or not the MFLBC is a feeding ground for the Indiana bat. If so, the Indiana bat will be considered further in the ecological risk assessment and, appropriate actions will be proposed to protect its habitat from site contaminants. To accomplish this, Ruetgers-Nease studied the creek from the point closest to the site downstream to the Lisbon spillway, and:

- Identified the main grasses, shrubs, and trees along the creek;
- Estimated the distance that the trees overhang the creek;
- Determined the presence of structures suitable for the bats to inhabit such as dead, dying, or hollowed-out trees; and
- Determined the creek's potential (based on Ohio EPA data), for supporting a population of aquatic insects that would be potential food sources for the bats.

Supplemental Sampling of Egypt Swamp

Twenty-seven additional wetland soil and sediment samples were collected in areas of Egypt Swamp which were not previously sampled. The results from the proposed wetland soil/sediment samples will be combined with the previous sediment and floodplain soil sample results to provide a more thorough characterization of the concentration and distribution of the chemicals in the Egypt Swamp area.

Ecological Characterization of the Wetlands and Other Habitats

The agencies required Ruetgers-Nease to expand the ecological study of wetlands and other habitats along MFLBC. The additional activities included:

- Conducting a field investigation to verify the presence of the wetlands identified by the National Wetlands Inventory (NWI)*;
- Determining the presence of any significant MFLBC-wetlands not identified by the NWI;
- Characterizing wetland use;
- Describing the habitats in and around the creek and determining if significant creek habitats were overlooked in the previous studies; and,
- Providing a list of birds, mammals (or signs of their presence) and threatened/endangered plants observed in either the wetlands or along the creek during the habitat characterization.

* *The National Wetlands Inventory is a listing of known wetlands across the country.*

Additional Site Inspections

While Ruetgers-Nease completed these ecological investigations, U.S. EPA and Ohio EPA conducted additional on-site inspections. During these inspections, the agencies discovered that not all leachate originating from the site was being effectively collected, and in fact, was moving off site and into the MFLBC. Further testing of the leachate showed the presence of mirex. In order to eliminate the potential for human and/or environmental exposure to mirex and other contaminants in the

leachate, an Administrative Order was enacted. This Order was negotiated through this past summer and early fall and was signed by U.S. EPA and Ruetgers-Nease in November 1993.

Leachate is produced when water, such as rain and melted snow, seeps through waste. This water carries components of the waste (e.g., mirex) through soil and potentially into the ground water, or over land, and off site. Mirex is an insecticide that was produced at the Nease factory for Hooker Chemical Company until 1969.

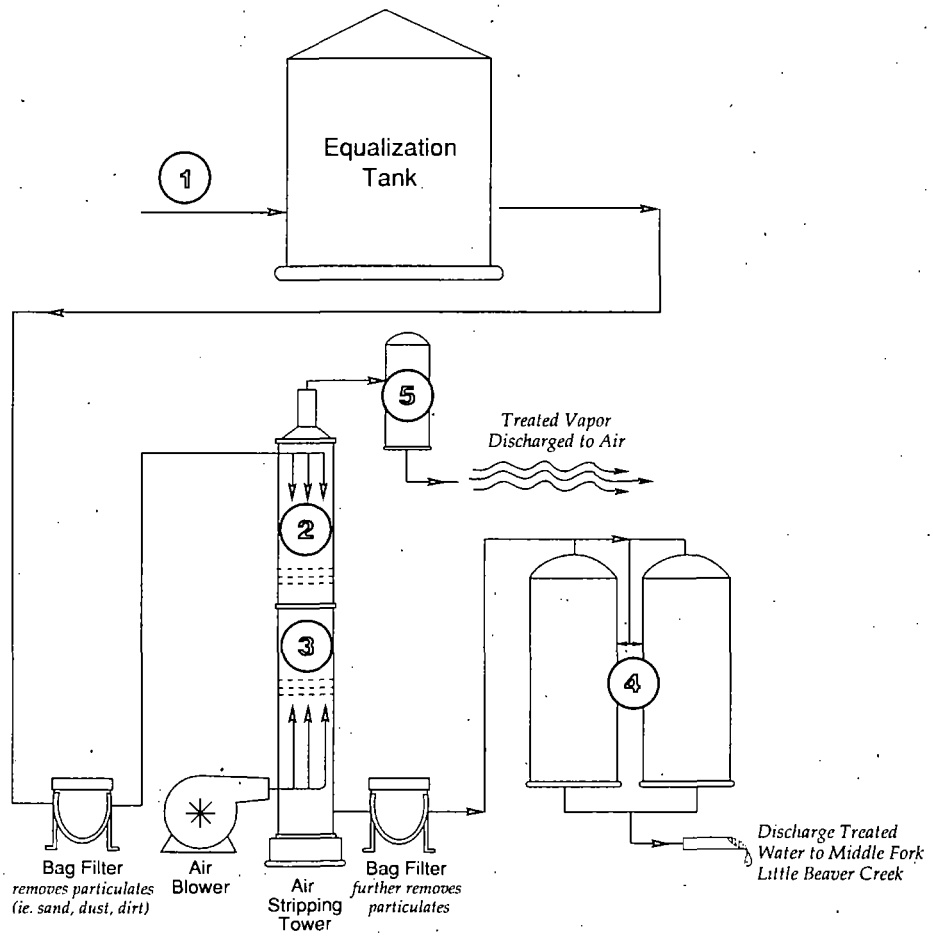
The Order legally requires Ruetgers-Nease to ensure that all leachate would be collected and treated on site. The treatment system consists of air stripping, filtration, and carbon filtering (see the Leachate Treatment System Diagram). Any leachate previously originating from the site and any contaminated ground water removed will be treated and discharged to MFLBC. Any vapor produced during leachate and ground-water treatment will be treated and vented to the air.

The Order further requires Ruetgers-Nease to monitor for the presence of leachate and to continually collect and treat all leachate and contaminated ground water until the site is fully cleaned up. A pilot study was conducted to ensure that the treatment system would effectively remove the contaminants.

Pilot Study for the Leachate Treatment System

Under the Superfund program, actual permits are not necessarily required to discharge treated waste streams into the air and water. The treatment system, however, must still meet the appropriate federal, state and local discharge standards.

Leachate Treatment System



1. Contaminated ground water is withdrawn from leachate collection pumps.
2. Contaminated water is distributed uniformly over a series of perforated trays.
3. Water cascades down through the perforated trays. The droplets are exposed to air forced upward through the tower. This process strips the VOCs from the water.
4. The treated water is then filtered with carbon to remove non-VOCs such as mirex and discharged into the Creek in compliance with the requirements of the wastewater discharge permits.
5. Air containing a small percentage of residual VOCs is filtered with carbon before being released into the atmosphere. This process will remove the majority of the VOCs such that the low level of emissions are not considered hazardous to human health or the environment.

Therefore, the agencies required Ruetgers-Nease to conduct a pilot study to ensure that the treated air and water that would be discharged will meet all federal, state and local regulations. It is important to note that during this study, all discharge was collected, tested and disposed of according to all applicable regulations. During the pilot study, Ruetgers-Nease hauled up to 25,000 gallons of leachate per day (four tank trucks) off site to a licensed disposal facility. The pilot study was conducted from December 1, 1993 to December 8, 1993. If the results of the pilot study indicate that all appropriate air and water discharge standards would be met, then the treatment system can begin operating immediately. If the results indicate that discharge standards would not be met, then the treatment system will be modified. Ruetgers-Nease will then have approximately two months to place the treatment system into continuous and reliable operation.

The Morning Journal,
Lisbon, Ohio
November 3, 1988

MIREX TOXICITY

Cancer

The toxicity of mirex with respect to cancerous effects is still under review by U.S. EPA. Mirex is currently classified as a Group B2 carcinogen. This means that it is probable that mirex causes cancer in humans based on U.S. EPA's determination that sufficient evidence already exists in experimental animals.

Non-Cancer

Non-cancer effects for mirex include any adverse health effects other than cancer such as liver or kidney damage. How severe the effects are depends on how much and for how long a person is exposed to mirex. U.S. EPA uses the results of animal studies to set a Reference Dose for humans. A Reference Dose approximates the amount of a toxin that humans can ingest daily over their lifetime without risk of experiencing non-cancer health effects. The Reference Dose takes into account the uncertainties of using animal studies to predict effects on humans and special sensitive populations, such as infants and the elderly.

The Reference Dose for mirex is .0002 milligrams per kilogram of body weight per day (.0002 mg/kg/day). This means that an individual weighing 154 pounds (70kg) could ingest a maximum of .0140 mg (or .0000004 ounces) of mirex each day for 70 years without affecting his or her health.

HEALTH ADVISORIES

Although there may not have been much publicity on the local health advisories for mirex in the past year, these advisories should still be followed. Signs explaining the health advisories are posted along the creek at every bridge where the roads intersect MFLBC (see Health Advisory Area Map on the front page of this fact sheet). Although many of these signs have been vandalized and may no longer be present, the following advisories are still in effect from the junction of Allen Road and State Road Alternate 14 continuing downstream to Route 11 south of Lisbon:

- People should refrain from consuming fish caught in MFLBC.
- People should **not** fish, swim, or wade in the creek.

Generally, it is advisable to limit contact with anything containing mirex such as creek sediment, floodplain soil, and fish from the creek. Parents should make sure that their children follow the advisories.

USE THIS SPACE TO WRITE YOUR QUESTIONS AND OR COMMENTS

Your input on the investigation of the Nease Chemical site is important to U.S. EPA. If you have any comments, questions or concerns regarding the information presented in this fact sheet or the on-going investigation, please use the space below to write them down, then fold and mail.

You may also call Cheryl L. Allen, U.S. EPA Community Relations Coordinator, at (312) 353-6196 or through U.S. EPA's toll-free number at (800) 621-8431.

Name _____

Address _____

City _____ State _____

Zip_____

NEASE CHEMICAL SUPERFUND SITE
Public Comment Sheet

Fold on Dashed lines, Staple, Stamp, and Mail

Name _____
Address _____
City _____ State _____
Zip _____

Cheryl L. Allen (P-19J)
Community Relations Coordinator
Office of Public Affairs
U.S. EPA, Region 5
77 West Jackson Boulevard
Chicago, IL 60604

WHAT'S NEXT?

U.S. EPA and Ohio EPA are currently preparing final comments on the Revised Draft RI to submit to Ruetgers-Nease. Results from the additional Phase I sampling and the agencies' comments will be included in the Final RI Report. A Final RI Report is expected to be released to the public in the Spring of 1994. At that time, U.S. EPA will host a public meeting to discuss the results of the RI. Ruetgers-Nease will then have 120 days to submit a Draft Feasibility Study (FS) to the agencies for review. The FS will evaluate various cleanup technologies and outline the final cleanup alternatives considered for the site.

HUMAN HEALTH STUDY

The Ohio Department of Health (ODH) is currently preparing a proposal to conduct a human exposure assessment at the Nease site. For more information on the study, contact:

Tracy Shelley, M.S.
Chief, Health Assessment Branch
Bureau of Epidemiology
Ohio Department of Health
246 North High Street
Columbus, Ohio 43266-0588
(614) 644-6447

FOR MORE INFORMATION

U.S. EPA Contacts

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Toll Free: 800-621-8431
10 a.m. - 5:30 p.m., Eastern Time

Ohio EPA Contacts

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Site Coordinator
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2110 Aurora Road
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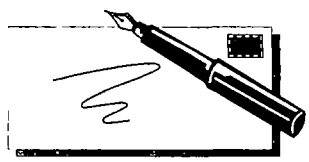
MAILING LIST

If you did not receive this fact sheet in the mail, then you are not on our mailing list. If you wish to be placed on the Nease Chemical Superfund site mailing list, please complete this form, detach, and mail to:

Cheryl L. Allen (P-19J)
Community Relations Coordinator
Office of Public Affairs
U.S. EPA, Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604



Name _____

Address _____

City _____ State _____

Zip _____ Affiliation _____

INFORMATION REPOSITORY

If you would like more information about the investigation or the Superfund program, there are copies of laws, reports, and other documents available for you to read in a notebook called an information repository. The information repositories for the Nease Chemical site are located at:

Lepper Library
303 E. Lincoln Way
Lisbon, Ohio 44432
(216) 424-3117

Salem Public Library
821 E. State Street
Salem, Ohio 44460
(216) 332-0042

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